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Subject: AMCBO Comments to WTC Final Report

The Association of Major City & County Building Officials (AMCBO) is pleased to submit the attached comments to the Final Report of the National Construction Safety Team on the Collapses of the World Trade Center Towers.

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AMCBO Comments WTC Report 080405.doc

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To: Dr. Shyam Sunder, Acting Assistant Director, Building and Fire Research Laboratory, and Lead Investigator, World Trade Center Disaster

From: Claude Cooper, AMCBO Chairman

Cc: U. S. Conference of Mayors
National Association of Counties
AMCBO Members

Date: August 3, 2005

Subject: Comments from the Association of Major City and County Building Officials on the June 23, 2005, Draft Final Report and Recommendations of the National Construction Safety Team on the World Trade Center Collapse

Thank you for inviting national comment on the June 23 draft final report of the National Construction Safety Team on the collapse of the World Trade Center and its 30 recommendations. Representing the building commissioners of the nation's largest cities and counties, AMCBO is pleased to offer for NIST's consideration the following comments.

Overview of Report & Recommendations

The National Institute of Standards and Technology has done an excellent job of thoroughly analyzing the effect of the tragedy on September 11, 2001, at the World Trade Center on the buildings occupants and first responders. The attack on, fires, and subsequent collapse of the World Trade Center represents a unique event that hopefully will not be repeated. Nevertheless, there certainly are lessons that can be learned from this unfortunate disaster.

There is a natural tendency among some in our community to "let the report stand on its own and let the model codes and standards communities deal with it." However, those of us who are public officials in major cities and counties realize that terrorism can strike anywhere and at any time – especially at targets that are highly visible or strategic to our economy. Typically those targets will continue to be in our major urban areas, and they will involve iconic buildings or buildings of significant economic importance. That being the case, major jurisdictions have a stake in your report and AMCBO offers the following overarching and specific comments.

Overarching Comments

Safety Record of High Rise Buildings: The attack on and collapse of the World Trade Center is a unique tragedy and one should be careful in interpreting the results of the NIST report. It could be easy for some to read the report and conclude that all high rise buildings are dangerous. That would not square with the facts that high rise buildings in this country have an enviable safety record. Fewer lives are lost annually in high rise buildings than in single family detached dwellings. We believe that NIST makes that distinction in its report. We trust that others reading the NIST report will likewise do so and the NIST findings will not be used to undermine public confidence in our existing high rise building stock.

Role that High Rise Construction Plays in Major Jurisdictions: Over the last half-century, the land use policies in this country have been questionable. Americans embraced the automobile and after World War II were off to the suburbs. The green countryside gave way to suburbia and many city dwellers took advantage of it, creating urban blight. The result has been rush-hour congestion, traffic jams, smog and environmental degradation. Cities have been denied the tax base of the suburbs while attempting to deal with a diverse population with high social needs. Cities have had to deal with the social issues of a population often with a low income, crime and urban decay. After a half-century, Americans are beginning to reverse this trend and find their way back to urban life for its cultural amenities and conveniences.

Cities have to have high rise buildings for commercial, residential, and cultural purposes. Cities will suffer if they lose the prospect of high rise buildings because they will become too expensive to construct or the public fears their safety. People could get the perception that high rise buildings are inherently dangerous and decide that "urban sprawl" is more desirable. In truth, smart growth and growth that goes up is better overall than less dense sprawl.

More enlightened land use policies allow cities to develop dense population areas by building high rise buildings. These urban areas can be served by mass transit that is more environmentally friendly and more energy efficient than the automobile. In addition, the needs of an aging population can be better served in a dense urban area than in suburbia. This report could be one factor in creating another flight from the city if it is used to create a perception that existing high rise buildings are inherently unsafe. Also, addressing a perceived "safety problem" may create regulations that make high rise buildings uneconomical to construct. This would be unfortunate for America's cities and surrounding counties and would be counter productive for a robust economy.

A common "rule of thumb" is that at least 80% of the gross floor area of a building must be leasable floor space for an economic building. High rise buildings may be priced "out of the market" if design constraints and safety requirements reduce that ratio below 80%. This issue and other cost implications need to be addressed in implementing recommendations in the NIST World Trade Center report.

Impact on Existing Building Stock and Retrofit: The NIST report studied the World Trade Center and orientated most of its recommendations toward new construction. In truth, there is a large stock of existing buildings in cities. The age of these buildings ranges from 1 to 100 years. These buildings must remain useable components of our building stock. Economic vitality and historical preservation are important reasons for cities to reuse the existing building stock. A significant percentage of development in urban areas is funded by "tax breaks" from historic

preservation interests. NIST should be encouraged to study methods for economically retrofitting safety improvements in these buildings. AMCB0 recognizes that retrofitting is very complex, and it will require considerable research and funding from multiple sources.

These existing buildings can be grouped into commercial and residential buildings for discussion purposes.

Commercial buildings are those buildings used for business, mercantile, assembly and other related purposes. Generally, the private sector can do a limited amount of safety related improvements if they can "pass the costs through" to the tenants with a long-term lease. This is generally ten years. However, there must be a legal basis for establishing this need. The results of NIST research can provide the scientific and technical basis for determining the legal requirement.

Residential buildings include condominiums and apartments. Typically these are occupied by older Americans and a significant percentage of the occupants are on a "fixed income". They cannot absorb the cost of making these safety-related improvements. Also, these people are politically active. It is very difficult politically for politicians to impose new building regulations on these people to make safety-related improvements in the building. NIST research can help identify less expensive alternatives and help find improvements that are more feasible.

Comments Specific to the Eight Groupings of NIST Recommendations

AMCB0 has specific positions on each of the groups of recommendations as follows:

Group 1 Increased Structural Integrity

AMCB0 endorses these recommendations.

Group 2 Enhanced Fire Resistance of Structures

AMCB0 endorses these recommendations and suggests that NIST seek funding to conduct the research needed to secure answers to these questions. Manufacturers of products fund much of the research on fire rating of assemblies. These recommendations go further and recommend that more research be done into the underlying assumptions of building design for life safety. AMCB0 feels that research is needed to secure answers to these questions and that the Government should conduct the research.

Group 3 New Methods of Fire Resistance Design of Structures

AMCB0 endorses these recommendations and suggests that NIST seek funding to conduct the research needed to secure answers to these questions.

Group 4 Improved Active Fire Protection

AMCB0 endorses these recommendations.

Group 5 Improved Building Evacuation

AMCB0 feels that research is needed on evacuation techniques and practices and that the Government should conduct the research.

Group 6 Improved Emergency Response

AMCB0 endorses these recommendations.

Group 7 Improved Procedures and Practices

AMCBO endorses these recommendations.


Group 8 Education and Training

AMCBO endorses these recommendations.

AMCBO thanks NIST for this study and urges it to work with the construction and codes and standards communities and regulatory and elected officials to take a careful approach toward implementation least it produces a product that is too expensive to construct. Also, a global vision is needed along with more research – a global vision that keeps our urban areas as desirable and viable places to work and live.

AMCBO commits itself to assisting NIST on an “as needed” basis for further research or comments on future efforts. In that regard please feel free to contact me in Richmond at 804 646-6624 or contact AMCBO Secretariat, Robert Wible, at 703 481-2035.

Sincerely,


Claude Cooper
AMCBO Chairman